



DOES THE ISSUE OF CLIMATE CHANGE NEGATIVELY IMPACT MENTAL HEALTH?

Muhammad Sahel

Impact & Research Fellowship Program, Harvard Student Agencies, In collaboration with Learn with Leaders

ABSTRACT

Climate change is a major issue concerning many countries around the world. It gave birth to numerous fluctuations in the weather that resulted in the increase in frequency of natural disaster. Human activities such as burning fossil fuels, mass deforestation has increased the amount of CO₂ emission in the atmosphere which fuels the climate change. For the past few years, scientist had noticed that climate change also has direct and indirect impact on people's mental health. It has increased the percentage of people having psychological disorders like stress, anxiety, post-traumatic stress disorder (PTSD) and suicidal ideation. Mental health issues vary from people to people and climate to climate. Climate change-related natural disaster has destroyed infrastructure and personal properties, negatively affected economy and forced people to migrate, these incidents have initiated anxiety-mood disorders in people. Air pollution which is often accompanied by climate change have created various disorders in children. Droughts in many countries have forced people to migrate to other countries and WHO thinks large amount of people will be migrating till 2050. This can create huge economic crisis in other countries as most of the refugees have taken shelter in developing countries. The scientists say that the issue of mental health due to climate change has been recognized quite recently and strict policies should be made regarding it. But still many of the countries have not considered it as a threat and have not created any policies regarding it. This research was conducted to see how deeply does climate change affect people's mental health.

KEY WORDS: mental health, climate change, natural disasters, psychological disorders, human activity, CO₂ emission.

Introduction

Climate change refers to a gradual change in the climate like precipitation and temperature over a short period in a given region. For the past several decades, temperatures all over the globe has increased dramatically. Earth has recorded its highest increase in temperature in the past 10 years. This dramatic climate change has alarmed governments and scientists all around the globe and it has been described as a critical global challenge with major threats to humans, their health, and lifestyle. Climate change can cause acute weather events and natural disasters which include floods, hurricanes, heat waves, and wildfires. It also leads to subacute events that can last for months including droughts, melting of glaciers, and rising sea level. These various alterations can ultimately lead to uninhabitable physical environments.

Climate change has proven to affect humans and their health in numerous ways. Floods caused due to climate change destroyed the infrastructure of many countries and as a result, society got exposed to contaminated food and water, bacteria, intoxicants, viruses, mold, and difficulty in the supply of health care facilities in the affected areas. Similarly, droughts can cause famine throughout the region which can lead to starvation if the region's economy is not strong enough to be able to meet the food supplies for its people. If the government fails to do that, the people living in that particular region or country might be forced to migrate causing an imbalance in the ecosystem. And many of the coastal cities in the world are at constant threat of disappearing due to the constant rise in sea levels e.g., Tokyo, Mumbai, New York City, Osaka, Istanbul, Kolkata, etc.

However, the damage caused by climate change runs deeper. The IPCC, an inter-governmental body of the UN has revealed that frequent increases in the temperatures and the changing climate have become a rising threat to the mental health of a person; which includes emotional distress, anxiety, depression, grief, post-traumatic stress disorder (PTSD), and suicidal behavior. The upper mentioned acute events can directly and indirectly have negative effects on mental health. This issue has been considered quite lately and has already caused enough damage. The WHO is also emphasizing to all the countries to take this issue in consideration.

Method

A survey was carried out to gather reviews of people about their mental health being affected by the changing climate. In this survey, 19 people of different ages and gender from different countries were questioned. This enabled us to focus on the factor whether people living in different climatic conditions have the same view on this issue. Moreover, a meta-analysis was conducted to gather scientific data on this topic. The data was mainly collected from two databases, PubMed and BMC, and articles from World Health Organization and World Meteorological Organization. When we searched for keywords in the databases, the search yielded 709 articles in total. Many of the articles were eliminated according to the relevance of the data to the topic leaving us with 32 articles. The articles were further eliminated according to the freshness of the data. This left us with 5 articles, from which data was then extracted for this research. If the articles contained different data about the same topic, all the data was added and a mean value was taken out to increase the average accuracy of the data.

Results

According to the survey conducted, 73.7% of the candidates think that the climate has changed over the past few years and 52.6% of them strongly believe that this change has led to depression, anxiety, post-traumatic stress disorder, and suicidal ideation. Furthermore, 84.2% of the candidates complained that due to high temperatures they are mostly in a bad and angry mood. People living in hot areas are also concerned about the financial imbalance that climate change has created in their day-to-day life, they have to spend more time in their home and use cooling appliances like air conditioners and fans, which results in higher electricity bills. Spending more time in air conditioning rooms has also led people to be more prone to cold-related illnesses like sinus, hypothermia, etc. Meanwhile, in developing countries, people who live in hot climates and are not able to purchase cooling appliances because of the poor economy and low per capita income are forced to spend their time in hot temperatures. These concerns have become additional stress to a person's life who is already struggling to overcome many other issues related to their work, family and other social relations.

It was surprising to see that many people living near the equator thought that climate change has less or no impact on a person's mental health and many of them did not feel that there is any change in their area's climate.

Do people think that the Climate Change in their area has affected their mental health?		
Countries	No.	Yes/No
USA	3	All say Yes
KSA	6	1) 4 say No 2) 2 say Yes
Pakistan	3	All say yes
Indiana	1	Yes
Canada	2	All say Yes
Trinidad and Tobago	1	Yes
Malta	1	Yes
North America	1	Yes
Italy	1	No

Table 1: It shows the countries of the candidates of the survey and their opinions on the topic

Discussion

In the beginning of 21st century scientists discovered that the temperature has increased by 1 C and this rate is increasing every year. This is a result of the increasing human activity and population. The growing population was followed by more and more industries being formed to fulfill the survival requirements, starting from 1760. The human civilization has approximately emitted 545 billion tons of CO₂ since then and the rate of this emission is increasing by a factor of 6% every year. It is also observed that the frequency of climate-related weather disasters has increased by 48% which has caused destruction in many areas.

There are now research bodies being formed that are rapidly expanding that are constantly researching the mental health consequences of climate change-related events. Studies have shown that victims of climate change-related disasters have more psychological concerns than their physical health. One of the studies researching psychological disorders in the survivors of hurricane Katrina which (occurred in 2005) showed that 20-35% of them were experiencing mental illnesses following the disaster. Another study showed that 31.5 % of the survivors had anxiety-mood disorders. These studies were conducted by Tunstall et al. and Galea et al. There was also an increase in suicidal attempts recorded in the victims of Hurricane Andrew. Similarly, countries experiencing extreme heat have recorded an increase in the admission of people with mood and behavioral disorders. This includes schizophrenia, mania, and neurotic disorders. Extreme heat can also cause wildfires which also have a great impact on mental health. These are all direct impacts of climate change on mental health.

There are various indirect effects that are caused as a result of damages to personal or social infrastructure, physical health effects, loss of income and employment opportunities, and reduction in the productivity of the economy especially the societies which are based on agriculture, and the possible violence and conflicts due to lack of resources. Long-term droughts have already become a reason of migration in many countries, and it can influence many psychosocial outcomes like stress, PTSD, anxiety and trauma. It is estimated that 70.8 million people have already migrated due to weather conflicts and the United Nations University has estimated that 25 million to 1.1 billion people will migrate due to climate change. 84% of the people who migrated are given refuge in developing countries. Denmark is one of the countries in which large numbers of people have migrated to other countries due to climate change. Air pollution, which is inevitable during climate change has also been linked with mental effects. Many studies have also linked pollution with pathophysiology of certain neurodevelopmental and behavioral disorders in children.

Even after being such a serious issue, unfortunately many of us are not prepared for this upcoming pandemic. According to the WHO survey, it was found that out of the 95 surveyed countries only 9 countries have recognized mental health issues and psychological support in their national health and climate change programs.

Conclusion

According to the survey and the data collected, the results support the hypothesis that climate change does negatively affect people's mental health and it can increase with an increase in. However, the data collected from the survey was not enough as only 19 people were surveyed due to the lack of convenience and time. It is recommended that at least 40 – 50 people be surveyed to get a strong idea of the general population's opinion.

Climate change has proven to be a serious issue and the world needs to find an immediate solution for it. All the countries should work together in order to reduce their carbon foot print all over the world. Different international forums like World Health Organization, United Nation Organizations etc. should create strict policies to be implemented in their member countries in order to overcome this issue effectively. Failure to act now will inevitably result in a serious threat to the survival and growth of humanity.

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